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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FISH & RICHARDSON PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
WANG, EUGENIA	

ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No.	Applicant(s)	
	10/520,579	HOOD ET AL.	
	Examiner	Art Unit	
	EUGENIA WANG	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 20-29* is/are pending in the application.

4a) Of the above claim(s) *20-22 and 24-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 22, 2010 has been entered.

Response to Amendment

2. In response to the amendment received February 22, 2010:

a. Claims 9-19 have been cancelled as per Applicant's request. Claims 20-29 have been added. Claims 1-8 and 20-29 are pending with claims 20-22 and 24-29 being withdrawn by original presentation, as being drawn to an unelected invention. (See below for details.)

b. It is noted that it has been indicated that claims 20-22 and 24-29 are withdrawn by original presentation (as listed above and as set forth below) as set forth below, it is noted that the claim numbering is improper. Specifically, there is no claim 24, two claim 25s, two claim 26s and no claim 27. Accordingly, it is submitted that perhaps the first claim 25 should be claim 24 and the second claim 26 should be claim 27, which is the interpretation taken with respect to the claim numbering as set forth above and below in the Election/Restriction section. Clarification for the record is requested (even though the claims are withdrawn).

c. The previous 112 rejection has been withdrawn in light of the amendment.

d. The same prior art has been applied; however, a slightly different interpretation has been taken. Such changes are necessitated by the amendment.

Election/Restrictions

3. Newly submitted claims directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 20-22 and 24-25 and 26-29 are directed to independent and distinct assemblies with distinct special technical features (similar to species 2 and 3, respectively of the original restriction requirement set forth in the action dated April 6, 2009). The reason as to why the species lack the same or corresponding special technical is reiterated below for clarity's sake: Species 1's (claims 1-8, as elected, and newly submitted claim 23, dependent upon claim 1) special technical feature lies (a) in the channels in the distribution foil extending from a first edge to a second edge and (b) in the presence of the cover foil extending over the distribution to enclose the distribution foil channels. Species 2's (claims 20-22 and 24-25) special technical feature lies (a) in the fact that the channels of the distribution foil extend from either a first edge or proximal position to a second edge or proximal position and (b) that the cover foil is co-extensive with a substantial part of the distribution foil to enclose a part of the length of the distribution foil channels. Species 3's (claims 26-29) special technical feature lies (a) in the fact that the channels of the distribution foil extend from either a first edge or proximal position to a second edge or proximal position and (b) in the placement of the distribution membrane

(between an MEA and fluid flow plate). Since all the species, as listed above have the special technical feature as identified, wherein the specified special technical feature of each species is different, the species are seen to be distinct.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-22 and 24-29 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

4. Applicant's arguments filed February 22, 2010 have been fully considered but they are not persuasive.

Applicant submits that independent claims 20 and 26 contain features "almost identical" to that of claim 1 and conclude that unity of invention under PCT standards has been achieved (specifically stating that the expression "special technical features" corresponds to "those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art").

Examiner respectfully disagrees. Just because each species include a generic feature does not mean that the special technical features are not different. As set froth within the restriction requirement, the special technical feature includes the specifics as set forth within the restriction requirement (set forth above, not reiterated for brevity's sake), and thus the special technical feature of the species lies in the combination of the generic with the each distinct feature of the distinct species. Examiner would like to

emphasize a portion of PCT Rules 13.1 and 13.2 that applicant has quoted in their remarks on p 13 – the fact that it is the "technical features…considered as a whole…". Accordingly, it is submitted Applicant's position that there is a generic portion in all of the claims does not consider the structure described by the claims considered as a whole. Furthermore, Applicant still has not provided proof or reasoning as to how the specific, distinct technical features as set forth within the original restriction requirement (and reiterated above, as applicable to the new claims), do not constitute a portion of the special technical feature of each species, as they help define the distinct structures/features of each species. Thus the arguments are not found to be persuasive.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites that the channels (of the distribution foil) terminate "at the second edge at different positions…" However, such a

claim language is not supported by the original disclosure. For example, fig. 5 shows channels (second series of channels [53]) in a foil [47]. However, the termination point of each channel is not at distinct places on the second edge [45]. For example the four channels [53] end at the convergence structure [54] (one place on the second edge). Furthermore, such termination (of the channels [53]) is not at the second edge [45]. They are at convergence structures [54] (fig. 5), which are set back from the second edge [45]. Accordingly, such claim language appears to contradict the nature of the invention as originally disclosed. Thus, such claim language is seen to be new matter. Since claims 2-8 and 23 are dependent upon claim 1, it is rejected for the same reason.

6. Claims 1-8 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites “field plate channels” (line 2) and then recites “a respective field plate channel” (line 10). This appears to over define the existing field plate channels as it is unclear as to whether or not "a respective field plate channel" refers back to the previously noted field plate channels or refers to a new field plate channel. Additionally, with the introduction of such claim language, it is unclear as to what constitutes a channel versus what constitutes channels. The specification does not clarify this. For example fig. 4(a) refers to portion [16] as both a channel and channels (p 8, lines 15-20). Clarification is required. Since claims 2-8 and 23 are dependent upon claim 1, they are rejected for the same reason.

b. Claim 3 claims convergence structures for the distribution flow channels. However, such claim language appears to contradict claim 1, which states that each channel terminates at the second edge at different positions. It is uncertain how channels that terminate at different positions have convergence structures (wherein “convergence” is defined a place of convergence/meeting). Accordingly, it is unsure how different terminating places converge at that terminating place (thus forming a convergence). Since claims 4-5 are dependent upon claim 3, they are rejected for the same reason.

c. Claims 3, 8, and 23 recites the limitation "the distribution foil channels" in lines 1-2, lines 1-2, and line 1, respectively. There is insufficient antecedent basis for this limitation in the claim. (It is noted that independent claim 1 provides “distribution channels” (line 5). Accordingly, it is submitted that the word “foil” should be removed to conform with independent claim 1.)

d. Claim 23 recites the limitation "the first positions" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Note: In light of the 112 rejection, the following claim interpretations have been applied - different sections at ‘an end’ of a channel can constitute a terminating at different positions, wherein (a) “edge” is interpreted to be any place near/close to the edge portion, and (b) such positions do not preclude the fact that the channels again converge at another point; furthermore (c) each "rib" portion in a serpentine channel constitutes the breaking out of a channel to form a plurality of channels.

Claim Rejections - 35 USC § 103

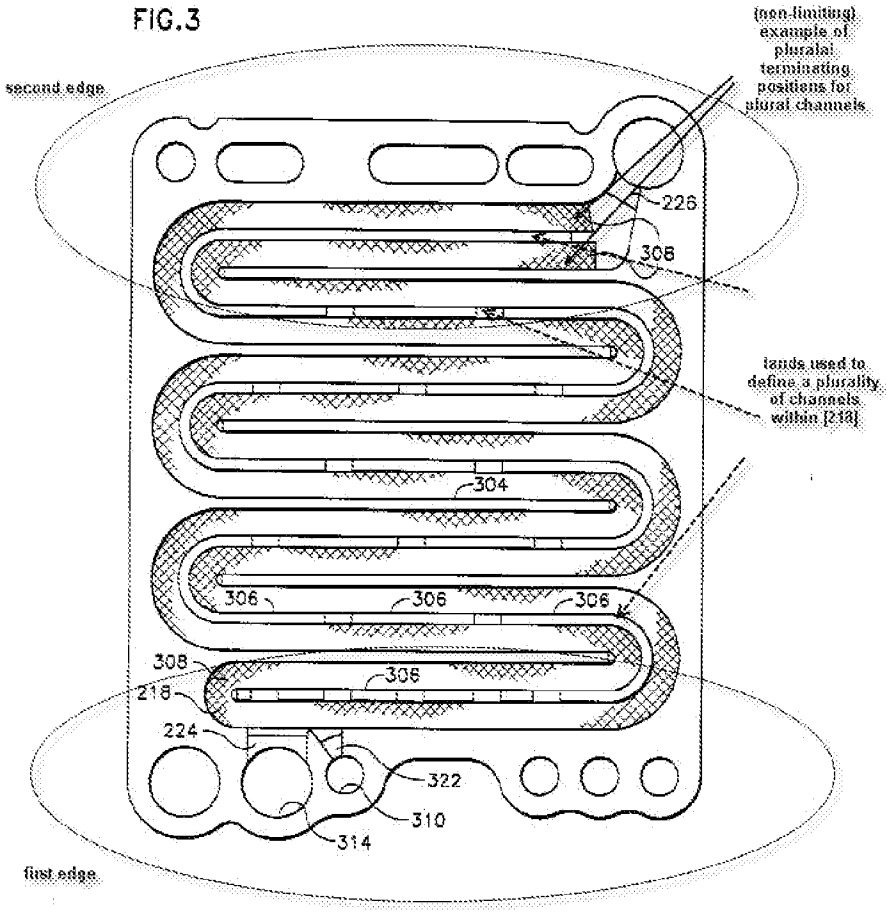
The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 2, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6066408 (Vitale et al.) in view of US 6303245 (Nelson) and US 5998054 (Jones et al.).

As to claim 1, Vitale et al. al teach of a fuel cell assembly (fig. 1; col. 1, lines 8-12). There is a fluid flow plate (for example cathode plate [216]) with channels (for example flow channels [210], which constitutes channels as a plurality of grooves/channels are seen in the cross sectional view, as in fig. 1, along with any of the through holes through the plate), which forms the pattern seen in the plate, barring specification as to what constitutes a channel and the relationship of such channel. (See also, the 112 section for the interpretation taken with respect fact that a serpentine path constitutes channels.) Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22,13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

Furthermore, there is a distribution foil (cooler-humidifier plate [202]) wherein with a plurality of channels (fig. 3). (It is noted that the lands [304] and island lands [306] are taken to from a plurality of channels within channel [218]. Additionally, it is noted that although not depicted, that one embodiment includes a plurality of channels (col. 7,

lines 59-63). As seen in fig. 2C, portions of the channel of cooler-humidifier plate [202] extends across the plate. "At a first edge" (see 112 rejection for interpretation as to what constitutes "at") can be interpreted to be the inlet portions, such as inlet manifold hole [314] and water inlet hole [310] as well as upper portions of the channel [218] (see fig. 3). "At a second edge" (see 112 rejection for interpretation as to what constitutes "at") can be interpreted to be the outlet portions, such as gas outlet [226] and lower portions of channel [218] (see fig. 3). Accordingly, the channels can be said to terminate at different positions (as indicated by the wicks and lands of fig. 3), wherein It can be seen in fig. 2C that the channels of the cooler-humidifier plate [202] are coincident with those of the cathode flow plate [216]. It is noted that outlet [226] bridges the termination of the channels (end portion of channel [218]) as well as provides direct fluid communication with a respective field plate channel (as it provides cathode gas water via manifold [256]) (fig. 2C; col. 7, lines 20-31). This constitutes a water injection point that enables delivery of water directly into corresponding field plate channel. The embodied material for the cooler-humidifier plate [202] is stainless steel (thus qualifying it to be considered a foil) (col. 6; lines 33-35). See annotated figure below for clarification as tot eh interpretation taken with respect to the distribution foil (cooler-humidifier plate [202]).



It is noted that the cathode plate [216] is seen to be a cover extending over the distribution foil (humidifier plate [202] to enclose the channels and form conduits for water between the them, as Vitale et al. teach that plate [216] serves the purpose of closing open-face flow channels [218] of the cooler-humidifier plate [202], wherein the wick of the coolant-humidifier plate [202] provides water to the reactant gas (col. 6, lines 44-46; col. 7, lines 64-65; fig. 3).

Vitale et al. does not specifically teach (a) that the cover (cathode plate [216]) is a foil (the material used for the anode/cathode plates) or (b) that water injection points (plural) exist.

With respect to (a), Nelson teaches that anode and cathode plates are typically metal (thus qualifying such plates to be a foil) (col. 1, lines 45-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a metal material (foil) for the cathode plate of Vitale et al. since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin,* 125 USPQ 416.

With respect to (b), Jones et al. teach that each fluid flow plate (bipolar plate) has a plurality of inlets/flow channels [126] and an equal amount of channels for water injection [131] (fig. 2; fig. 3). The motivation for employing such a system (multiple flow channels and a corresponding number of injection ports for water inlet) is that such a system would allow easier mixing and uniform distribution of water over the volume of the fuel cell assembly (col. 3, lines 5-13; 26-34). Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to have multiple inlet channels, wherein there is a channel for humidity that corresponds to each (as taught by Jones et al. and applied to Vitale et al.), in order to have a fuel cell system wherein the water introduced to the reactant flow can be more uniformly mixed and distributed through the cell.

As to claim 2, Vitale et al.'s inlet portion (i.e. gas inlet [314], water inlet [210], and portions of channel [218] close to the inlet) constitute a first series of channels extending to the first edge of the foil. Channel [218] with the lands [304] and island lands [306] constitute an array of channels in communication with the first series of

channels, forming a pressure distribution gallery, as such a depicted channel keeps pressure differential low (col. 8, lines 44-49). Vitale et al.'s outlet portion (outlet [226] and portion of channel [218] close to the outlet) constitute a second series of channels extending to the second edge of the foil (fig. 2C; fig. 3). (See annotated figure in the rejection to claim 1 as to the interpretation taken. See also the 112 section as the interpretation taken with respect to the first and second edge in light of the 112 issues.) Additionally, it is noted that Jones et al. has also been relied upon to teach that each fluid flow plate (bipolar plate) has a plurality of inlets/flow channels [126] and an equal amount of channels for water injection [131] (fig. 2; fig. 3) (as set forth in the rejection to claim 1). Accordingly, at the very least, the combination would render obvious such claimed plurality of channels (as applied to the second series).

As to claim 3, Vitale et al. teach that the channels (portion of channel [218] close to outlet [226]) terminates at a second edge. (See annotated figure in the rejection to claim 1 as to the interpretation taken. See also the 112 section as the interpretation taken with respect to the first and second edge in light of the 112 issues.) As seen in fig. 2C, outlet [226] can be seen to be a convergence structure, as it focuses water flow into the channels [210] in the fluid flow plate of fluid flow (as humid air exits through outlet [226]) (col. 7, lines 26-30).

It is noted that although Vitale et al. do not teach a plurality of convergence structures (corresponding with corresponding field plate channels), Vitale et al. has been combined with Jones et al., wherein Jones et al. provides such a teaching. The teaching and reasoning for obviousness are reiterated herein for clarity's sake: Jones

et al. teach that each fluid flow plate (bipolar plate) has a plurality of inlets/flow channels [126] and an equal amount of channels for water injection [131] (fig. 2; fig. 3). The motivation for employing such a system (multiple flow channels and a corresponding number of injection ports for water inlet) is that such a system would allow easier mixing and uniform distribution of water over the volume of the fuel cell assembly (col. 3, lines 5-13; 26-34). Therefore it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to have multiple inlet channels, wherein there is a channel for humidity that corresponds to each (as taught by Jones et al. and applied to Vitale et al.), in order to have a fuel cell system wherein the water introduced to the reactant flow can be more uniformly mixed and distributed through the cell. (It is noted that any plural injection points can be considered a convergence structure, as applied to the teaching of Vitale et al.)

As to claim 4, Vitale et al.'s convergence structure (gas outlet [226]) shows a recess on the second edge of the distribution foil (plate [202]), as gas outlet [226] is cut out (fig. 3).

As to claim 5, Vitale et al.'s cut out (gas outlet [226]) can be considered to be arcuate, as at least one portion of the cut out is curved.

As to claim 6, Vitale et al. has the structure wherein there is a termination point at the first edge (inlet portion of plate [202], as seen in fig.3). Furthermore one outlet [226] (also a termination point) feeds into the cathode supply inlet [258] (fig. 2c). Although, outlet [226] feeds into cathode supply inlet [258] at the second edge, it is seen that the claim language is met (as the channels terminate at the first edge as well as at one

supply manifold aperture) barring specification of the relationship between the first edge and supply manifold aperture. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22,13 USPQ2d, 1320, 1322 (Fed. Cir. 1989).

As to claim 7, Vitale et al. embody using stainless steel for the cooler-humidifier plate [202] is stainless steel (col. 6; lines 33-35).

As to claim 8, although Vitale et al. does not teach the method of which the distribution foil channels [218] are made, such a limitation is seen to be a product-by-process limitation, wherein the structure of Vitale et al. is the same as the claimed invention.

. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)(citations omitted).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the Examiner provides a rationale

tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP section 2113.

As to claim 23, Vitale et al. has the structure of distribution channels, wherein one outlet [226] feeds into the cathode supply inlet [258] (taken to be at a first position in light of the fact that such first position is not defined).

Response to Arguments

8. Applicant's arguments filed February 22, 2010 have been fully considered but they are not persuasive.

It is first noted that Applicant appears to have misread the previous rejection of record with respect to Vitale et al. (submitting that the first edge corresponds to [224] and the second edge corresponds to [226]). Although, the previous interpretation `interpret is no longer applied, Examiner would briefly like to address the misunderstanding (in order to clarify the difference in the in interpretations take with respect to Vitale et al.). The previous rejection of record relied on first and second edges defined as the front and back of plate [202] (not traversing across the plate). However, such an interpretation (that the first and second edge traverse across the plate) is now relied upon (see annotated figure in the rejection to claim 1). Arguments addressed to this interpretation are responded to in full below.

Applicant argues that Vitale et al.'s teaching only has one termination point [226], wherein the claim cites that at a second edge the termination are at "different positions…substantially coincident with, and in direct fluid communication with, a respective field plate channel…providing water injection points for the field plate channels and enabling delivery of water directly into corresponding field plate channels at the water injection points."

Examiner respectfully disagrees. It is noted that there are different "terminating" points of Vitale et al. (as defined by the lands set forth within channel [218]), wherein a place of convergence ([226]) is provided afterwards. (See annotated fig. in claim 3 in the rejection to claim 1 for details as to the interpretation taken.) It is noted that there is nothing within the claim barring such a claim interpretation. Furthermore, such a claim interpretation is made in light of the numerous 112 issues set forth above. Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Also, limitations appearing in the specification but not recited in the claim are not read into the claim. See *In re Zletz*, 893F.2d 319, 321-22,13 USPQ2d, 1320, 1322 (Fed. Cir. 1989). In such a manner, direct fluid communication (as claimed) is still achieved (through [226]). Additionally, it is noted that Jones et al. has also been relied upon to render obvious the teaching of a plurality of water injection points (due to the fact that Vitale et al. does only have one injection point [226]). (See rejection to claim 1 for full details.) Accordingly, it is submitted that the claimed features are

rendered obvious by the rejection of record. Thus, such arguments are not found ot be persuasive, and the rejection of record is maintained.

With respect to the arguments regarding the 103 rejections, Applicant argues that the prior art used to obviate the rejected claims (Nelson) do not cure the deficiencies of the primary reference (Vitale et al.). Applicant does not argue how the combination is not proper. Therefore, the Examiner maintains the obviousness rejections and upholds the rejection of the primary reference (now combined with Jones et al., in light of the amendment), as above.

Applicant addresses the newly claims (20 and 26, and thus their dependents). However, it is noted that such claims have been withdrawn by original presentation (as set forth above). Thus, arguments with respect to their differences with respect to the prior art are irrelevant, as such claims are withdrawn at this point.

Applicant argues that the dependent claims are distinct from the prior art of record for the same reason as the independent claim.

Examiner respectfully disagrees. The rejection with respect to the independent claim has been maintained, and thus the rejections to the dependent claims are maintained as well.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENIA WANG whose telephone number is (571)272-4942. The examiner can normally be reached on 7 - 4:30 Mon. - Thurs., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. W./
Examiner, Art Unit 1795

/Gregg Cantelmo/
Primary Examiner, Art Unit 1795